REMARKS

The Office Action of November 14, 2007, contains a rejection of Claims 1-5 alleging indefiniteness. It also contains 35 U.S.C. § 103(a) rejections of Claims 1-5 based on Kishida et al. in view of Troy et al. ('290) or Carson et al., in one case, and Troy et al. ('894) in view of Troy et al. ('290) or Carson et al. in another.

Claim 1 has been cancelled and rewritten as Claim 6 to overcome the indefiniteness rejections. Claims 2 and 3 have also been amended for this reason. The two 35 U.S.C. § 103(a) rejections have, it is respectfully submitted, been overcome in the remaining Claims 2-6 for the reasons hereinafter set out.

Regarding the claimed inventions, the invention of independent claim 6 relates to a resin composition which contains a specific core-shell modifier providing impact strength to an amorphous polyester resin. This resin thereby realizes excellent transparency and impact strength, as well as excellent whitening properties, at a low stress (particularly whitening resistance under stress). The core-shell modifier for impact strength is characterized in that core (A) is composed of a specific ratio of inner layer core (A-1) having a specific composition to an outer layer core (A-2) having a specific composition. Core (A) also has a specific composition as a whole, shell (B) is formed on the core (A) and the core-shell modifier composed of the core (A) and the core (B) has a specific refractive index. The use of the core-shell modifier satisfying all the subject matters provides an improved balance of transparency, impact strength and whitening properties at a low stress for an amorphous polyester resin composition.

As shown in the Table A which is attached hereto, Examples 1 to 7 (in the present description of each of which satisfies all the subject matters defined in Claim 6) realize an improved balance of transparency, impact strength and whitening properties at a low stress. In contrast, Comparative Examples 1 to 9 (in the present description of each of which does not satisfy all the subject matters) provide a poor balance of transparency, impact strength and whitening properties at a low stress.

Specifically, Comparative Example 1, wherein divinylbenzene (DVB) as a cross-linking agent is not used for forming inner layer core (A-1), provides poor whitening properties at a low stress as compared to Example 1. Comparative Example 2, wherein the amount of the cross-linking agent in both inner layer core (A-1) and whole core (A) is

larger than that defined in Claim 6, provides poor IZOD strength. Comparative Example 3, wherein the core (A) is composed of only one layer, provides poor transparency and whitening properties at a low stress as compared to Example 1. Comparative Example 4, wherein the amount of the whole core (A) in the impact strength modifier is smaller than that defined in Claim 6 provides poor IZOD strength. Comparative Example 5, wherein the amount of the whole core (A) in the impact strength modifier is larger than that defined in Claim 6 and the amounts of a butadiene monomer and an aromatic vinyl monomer are outside those defined in Claim 6, provides poor results for all transparency, impact strength and whitening properties at a low stress. Comparative Example 6, wherein the amount of inner layer core (A-1) is smaller than that defined in Claim 6, provides poor transparency. Comparative Example 7, wherein the amounts of a butadiene monomer and an aromatic vinyl monomer in inner layer core (A-1) are outside those defined in Claim 6, provides poor IZOD strength. Comparative Example 8, wherein the amounts of a butadiene monomer and an aromatic vinyl monomer in outer layer core (A-2) are outside those defined in Claim 6, provides poor IZOD strength. Comparative Example 9, wherein the amounts of an aromatic vinyl monomer in both inner layer core (A-1) and whole core (A) are larger than those defined in Claim 6, provides poor IZOD strength.

Regarding the 35 U.S.C. § 103(a) rejections, the innermost layer polymer (A) described in Kishida et al. is composed of 51-100 parts by weight of styrene or styrene derivative. For the innermost layer polymer (A), polyfunctional (or cross-linking) monomer and butadiene are not essential elements. In the present invention, on the other hand, the cross-linking monomer and butadiene monomer are both essential elements of inner layer core (A-1).

In the present invention, not only monomer ratio of inner layer core (A-1) and outer layer core (A-2), but also monomer ratio of core (A) as a whole are described, wherein (A) is composed of (A-1) and (A-2). On the other hand, only monomer ratio of each inner layer (A) or (B) are described, and the monomer ratio of the sum of inner layers (A) and (B) are not described (in Kishida et al.).

Troy et al. '894 (US 5,599,894) discloses a core/shell polymer consisting of (x) a first monomer mixture, (y) a second monomer mixture, and (z) a third monomer mixture, wherein (x) is the innermost layer, (y) is the inner layer and (z) is the outermost layer.

The (y) layer of Troy et al. '894 corresponds to the outer layer core (A-2) of the present invention. Although the (A-2) layer of the present invention includes butadiene monomer as the essential monomer, the (y) layer of Troy et al. '894 includes a C1-C4 alkyl methacrylate or a vinyl aromatic monomer as the essential monomer and does not include butadiene.

In the present invention, not only monomer ratio of inner layer core (A-1) and outer layer core (A-2), but also monomer ratio of core (A) itself, is described wherein (A) is composed of (A-1) and (A-2). On the other hand, only monomer ratio of each inner layer (x) or (y) are described and the monomer ratio of the sum of inner layers (x) and (y) are not described in Troy et al. '894.

In summary, applicants submit that Kishida et al. and Troy et al. '894 are each plainly distinguishable from the present invention and neither of these references suggest the claimed invention. Accordingly, Claims 2-6 should be in allowable form.

Respectfully submitted,

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ATTACHMENT: Table A

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TABLE A

	Inner layer core (A-1)		Outer layer core (A-2)		Whole core (A)		Remarks
	Composition (wt%)	Parts	Composition (wt%)	Parts	Composition (wt%)	Parts	
Ex. 1	Bd66.8/ST31.8/DVB1.4	31.1	Bd100	12.9	Bd76.5/ST22.5/DVB1.0	44.0	
Ex. 2	Bd44.3/ST53.3/DVB2.3	22.3	Bd80.1/ST19.9	29.7	Bd64.8/ST34.2/DVB1.0	52.0	
Ex. 3	Bd52.5/ST43.4/DVB4.1	11.4	Bd77.8/ST22.2	35.6	Bd71.7/ST27.3/DVB1.0	47.0	
Ex. 4	Bd39.4/ST58.9/DVB1.7	30.2	Bd100	21.8	Bd64.8/ST34.2/DVB1.0	52.0	
Ex. 5	Bd57.1/ST40.8/DVB2.1	24.2	Bd71.4/ST28.6	27.8	Bd64.8/ST34.2/DVB1.0	52.0	
Ex. 6	Bd66.8/ST31.8/DVB1.4	31.1	Bd100	12.9	Bd76.5/ST22.5/DVB1.0	44.0	
Ex. 7	Bd67.5/ST32.1/DVB0.4	31.0	Bd100	13.0	Bd77.1/ST22.6/DVB0.3	44.0	
Com. Ex. 1	Bd67.8/ST32.2	31.0	Bd100	13.0	Bd77.3/ST22.7	44.0	No cross-linking agent was used in inner layer core (A-1).
Com. Ex. 2	Bd58.6/ST27.9/DVB13.5	31.1	Bd100	12.9	Bd69.6/ST20.5/DVB9.9	44.0	The amount of the cross-linking agent in both inner layer core (A-1) and whole core (A) was larger.
Com. Ex. 3	Bd76.5/ST22.5/DVB1.0	44.0		0	Bd76.5/ST22.5/DVB1.0	44.0	The core (A) was composed of one layer.
Com. Ex. 4	Bd54.7/ST43.9/DVB1.4	9.0	Bd100	4.0	Bd68.5/ST30.5/DVB1.0	13.0	The amount of whole core (A) was smaller.
Com. Ex. 5	Bd30.3/ST67.7/DVB2.0	42.3	Bd55.6/ST44.4	44.7	Bd43.3/ST55.7/DVB1.0	87.0	The amount of whole core (A) was larger and the amount of ST was larger.
Com. Ex. 6	Bd61.9/ST31.3/DVB6.8	6.4	Bd78.9/ST21.1	37.6	Bd76.4/ST22.6/DVB1.0	44.0	The amount of inner layer core (A-1) was smaller.
Com. Ex. 7	Bd13.6/ST84.0/DVB2.4	22.1	Bd100	29.9	Bd63.3/ST35.7/DVB1.0	52.0	The amount of ST in inner layer core (A-1) was larger.
Com. Ex. 8	Bd98.2/DVB1.8	29.2	Bd21.7/ST78.3	22.8	Bd64.7/ST34.3/DVB1.0	52.0	The amount of Bd in outer layer core (A-2) was smaller.
Com. Ex. 9	Bd15.7/ST79.5/DVB4.8	12.5	Bd66.6/ST33.4	47.5	Bd56.0/ST43.0/DVB1.0	60.0	The amount of ST in both inner core (A-1) and whole core (A) was larger.

Parts: Parts by weight
Bd: Butadiene, St: Styrene, DVB: Divinylbenzene